

2011 Military Health System Conference

A Provider's Perspective

Utilizing Deployed Information Technology to Care for Our
Wounded Warriors

The Quadruple Aim: Working Together, Achieving Success

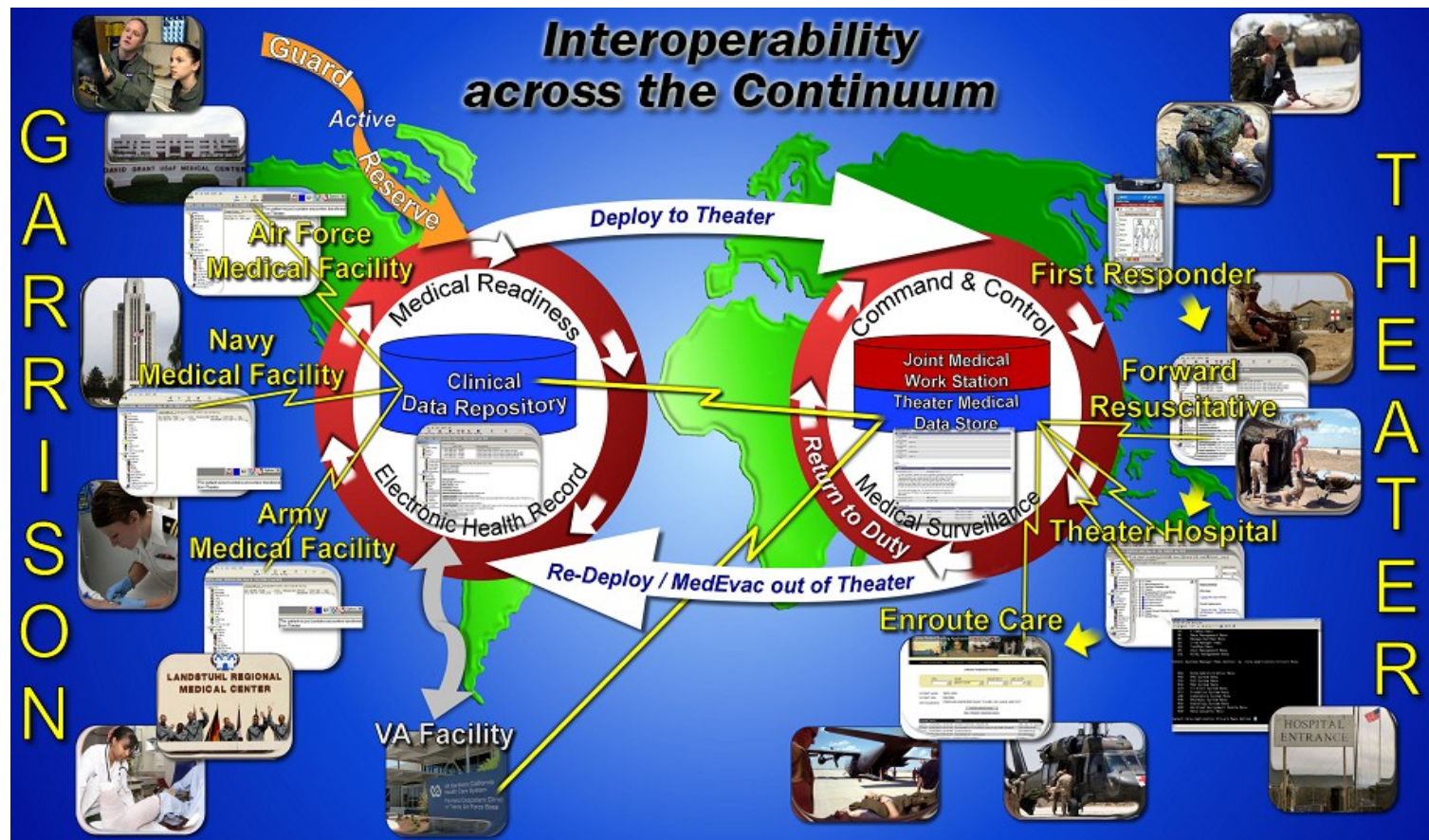
Michael J. Meier, CDR, MC, USN

24 January 2011

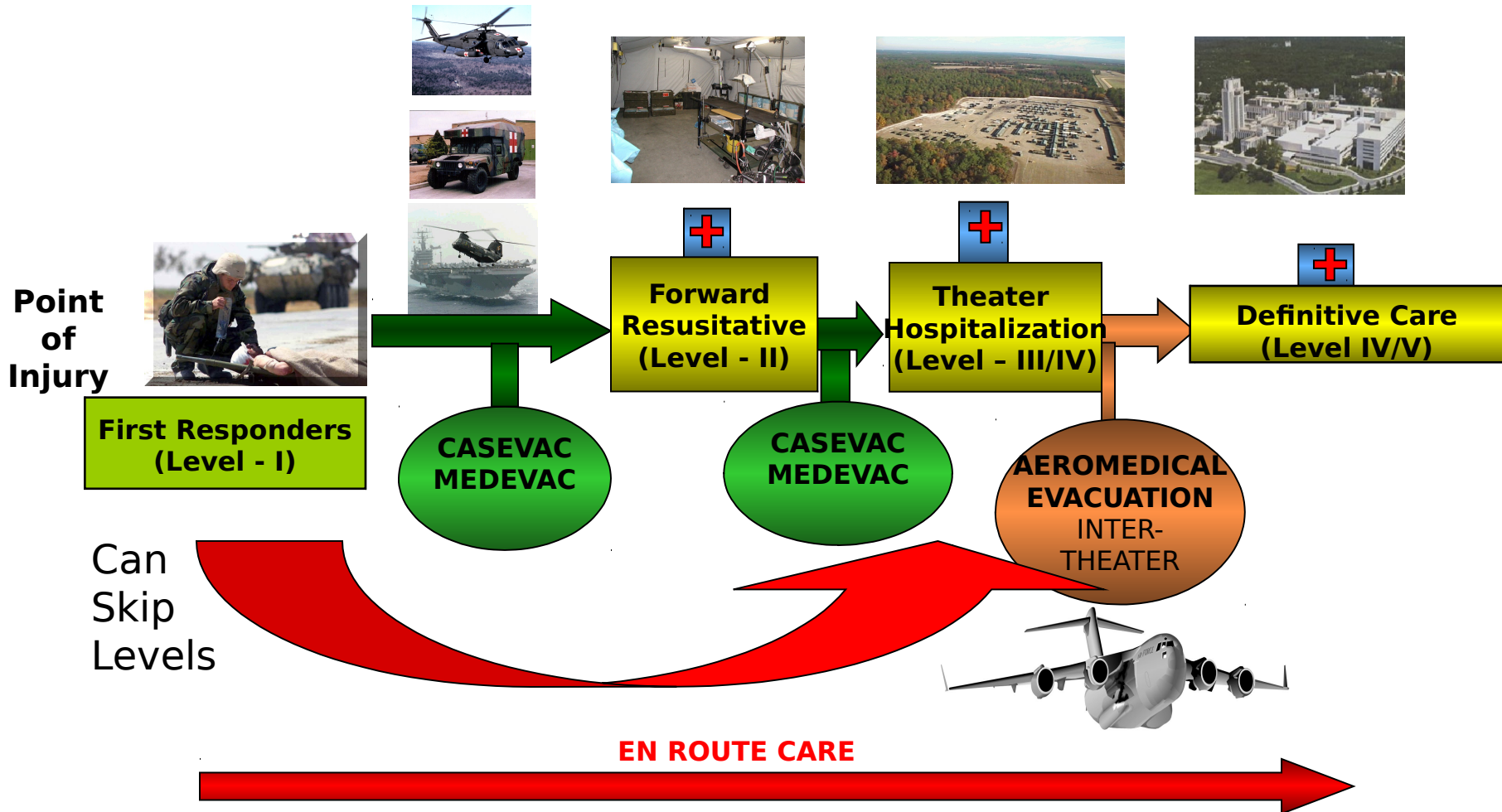


The Joint Staff, J4/HSSD

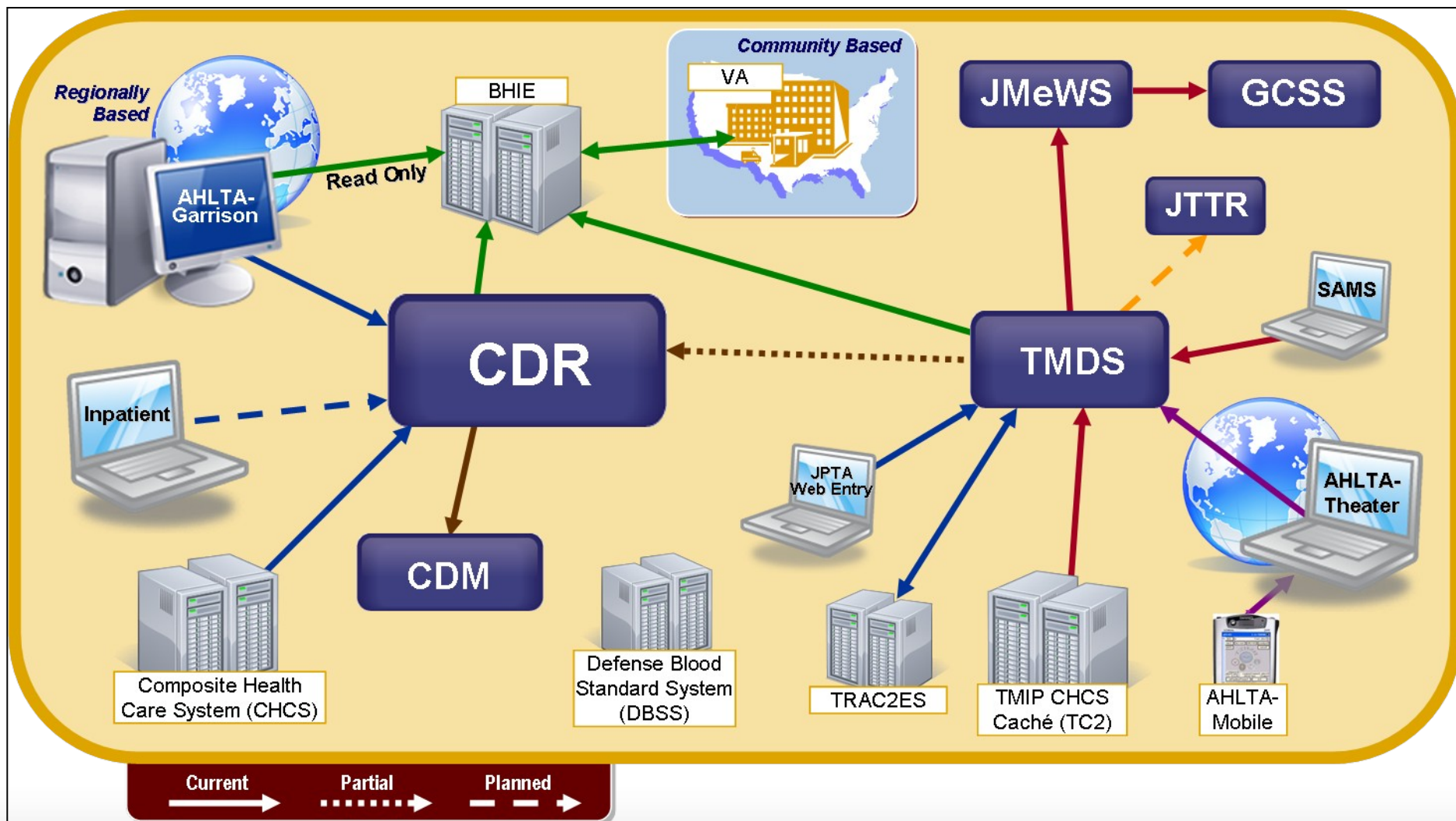
Continuum of Care



Treatment/Patient Movement Flow



EHR Data Flow to Support the Continuum of Care



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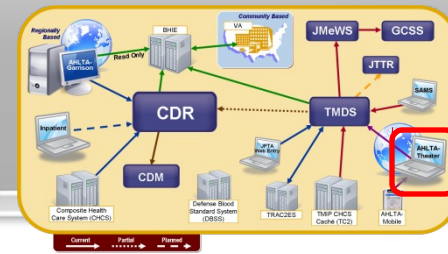
A close-up, over-the-shoulder view of a soldier in camouflage uniform and helmet. The soldier is holding a ruggedized handheld electronic device (HED) with a screen displaying a map or data. A black cable is connected to the device. The soldier is wearing a green tactical vest. The background is a light-colored, textured surface, possibly a wall or ground.

- Point of injury clinical documentation (now including traumatic brain injury)
- Health history information, including allergies and medical readiness data
- Medical references (pharmacy library, Thomson Clinical Reference)
- Data feed to AHLTA-Theater

- Helps ensure accuracy of information with automated medical coding
- Enables providers to access information at any location supporting the highest level of

- Training
- Battery Life
- Durability

1) ...outpatient documentation solution



Extends the sustaining-base electronic medical record (AHLTA) capability, look and feel to the Theater of Operations

■ Key Features

- Low and no communication environment (store and forward)
- Interfaces with SAMS, TC2 and AHLTA-Mobile
- Bed and Order Management
- Theater Admin/Theater Security (create clinics, manage users)
- Able to import patient demographic data from Authoritative Data Source
- Drug-Drug/Drug-Allergy interaction screening
- Alternate input method

■ Key Benefits

- Improve system availability, reliability and sustainability
- Enhance the delivery of patient care
- Enhance the ability to provide complete and accurate of documentation of patient care at every echelon of care

■ Key Issues

- Training
- Connectivity
- Duplicate Patients
- First Responder Documentation

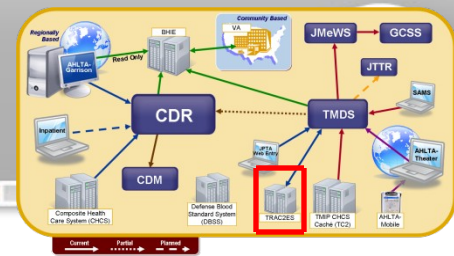
[illegible]A man in a white lab coat is shown in profile, looking at a computer monitor. The monitor displays a chest X-ray with a red spot on the right lung, indicating a lesion. The background is a clinical setting with medical equipment.

- Provides laboratory, radiology and pharmacy ordering and results retrieval capabilities; enables users to schedule outpatient clinic/radiology procedures
- Uses the TMIP Framework for transmission of data to TMDS
- Clinical Notes for different procedures including admission, discharge and patient progress, transportable Clinical Patient Records
- TC2 has processed 48,129 total records from June 2007 to present

- Enhanced Inpatient/Ancillary Continuity of Care
- Enables the Deployed Theater to achieve a paperless Inpatient Record
- Increased clinical and administration efficiency by providing clinical documentation capabilities

- Training
- Business Processes

TRANSCOM Regulating and Command & Control System (TRAC²ES)...global patient movement solution



Enables joint global patient movement, planning, tracking and Command and Control (C²) within (intra) and between (inter) theaters

Global Planning and Visibility



■ Key Features

- Links originating and destination MTFs with medical evacuation transportation assets and the C² infrastructure
- Provides the ability to plan and manage end to end patient movement
- Supports strategic and tactical operations in peacetime and contingency environments

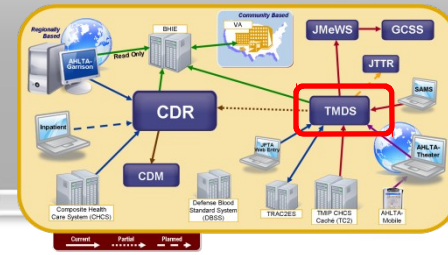
■ Key Benefits

- Maintains continuous global visibility and awareness of patients and the patient movement system
- In transit visibility (ITV)
- Combines transportation, logistics and clinical decision elements into seamless patient movement

■ Key Issues

- Not an EHR
- Enroute Care Documentation

Theater Medical Data Store (TMDS)...central Theater medical data collection and distribution point



Expanded view of
health information
across all levels of care
with enhancements to
integrated functionality

■ Key Features

- Capability to view, track, and manage ill or injured patients as they move through Theater levels of care, sustaining-base MTFs, and facilities shared with VA
- Ability to access Theater medical data and pass medical data to the Clinical Data Repository
- Services-oriented architecture
- Interface for benefits assessment
- Shares information with command and control systems for medical situation awareness

■ Key Benefits

- Allows VA to access Theater medical data for a patient who has entered a VA medical facility
- Provides central location for all medical data generated in Theater...integrated into the electronic health record

■ Key Issues

- Training
- Awareness

[illegible]

JMOWC

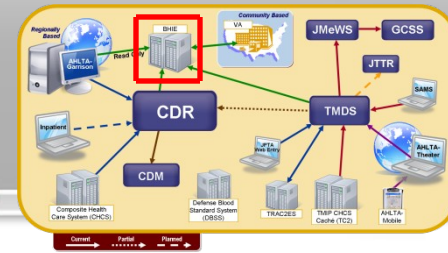


- Web-based application that provides medical information and unit status and readiness to medical leadership from the unit level to the Joint Task Force, Combatant Commanders and to Service/DOD Components.
- Ad hoc reports based on patient data
- Medical unit readiness reporting and aggregation capability (Annex Q reporting)

- Common operational picture that combines medical facility readiness and status information displaying on a map
- Symptom-based disease detection
Customizable disease surveillance
- Diagnosis-based disease detection and Disease Non Battle Injuries (DNBI) with Automated DNBI reporting
- Enhances situational awareness and decision making for Joint Planners and Command Control Staff
- Displays data that is required by planners and operational staff at respective levels

- Training
- SIPR Availability
- Awareness
- Data Quality

Bidirectional Health Information Exchange (BHIE)...secure real time display of viewable health data between DOD/VA



Allows DOD and VA providers to view clinical information in real time for patients who receive care in either agency health system

- SHARE Web Portal (stand alone web application)
- AHLTA-BHIE Data Viewer (viewer within AHLTA)

■ Key Features

- Encounters/clinical notes
- Problem lists/procedures/diagnoses
- Vital signs
- Outpatient medications, laboratory results, radiology reports and allergies
- Theater level clinical data from TMDS
- Inpatient documentation from Essentris®
- Family histories/social histories/other histories
- Questionnaires

■ Key Benefits

- Enhance the provision of care to Wounded Warriors
- Reduce the need to exchange paper records with the VA
- Enhance the delivery of patient care
- Enhance readiness
- Increase clinical and administrative efficiency

■ Key Issues

- Training
- Awareness

Medical Situational Awareness in Theater (MSAT)



- Geospatial Information System incorporating a 3-D viewer
- Global medical information and medical reference
- Health threat alerts
- CBRN alerts
- Disease surveillance data
- Current and forecasted weather

Medical Situational Awareness in Theater (MSAT) (Cont'd)



- Personnel Location
- Medical Unit Location
- Single Sign-On interface with Global Combat Support System – Joint (GCSS-J)
- Publishing and consuming of web services via Net-Centric Enterprise Services (NCES)

Deployed October: 139 Unique Visitors in November



Medical Situational Awareness in the Theater

MSAT Demonstration

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Questions/Additional Information:



Michael.meier@js.pentagon.mil

Arthur.Anthony@tma.osd.mil

<http://fhp.osd.mil/>

http://www.health.mil/MHSCIO/programs_products/jmis.aspx

Backup Slides



Backup

Supporting Beneficiary Care Defense Medical Logistics Standard Support (DMLSS)



DMLSS enabled \$4.3B in pharmacy and medical surgical purchases for MHS facilities throughout the DoD and the combat Theater



■ Key Features

- Implements just-in-time logistics, eliminating the need to maintain large pharmaceutical and medical/surgical inventories at the wholesale level
- Allows users to select and order the best value item required
- Located at every DoD health care facility worldwide

■ Key Benefits

- Standardizes medical logistics management among the services
- Reduces the time spent on logistics planning and management
- Improves the effectiveness, efficiency and quality of health care delivery

“The receipt of goods, once ordered, is FAST! I’m very satisfied with that.”

Anonymous DMLSS User, 2009 TMA Customer Satisfaction Survey

Supporting Beneficiary Care Patient Movement Items Tracking System (PMITS)



In FY09, PMITS supported over 2,000 aeromedical evacuations. No mission was cancelled or delayed due to a lack of PMI equipment



■ Key Features

- Tracks the Patient Movement Item (PMI) equipment used during aeromedical evacuation missions
- Provides hand-held scanners and bar code technology to capture the movement of the PMI inventory

■ Key Benefits

- Timely and accurate identification of PMI equipment at each site
- Supports less investment in inventory while improving equipment availability

“Never encountered a system failure”

Anonymous PMITS User, 2009 TMA Customer Satisfaction Survey